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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,172	07/06/2001	Katsumi Inoue	027260-475	9792

7590 08/09/2004

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EXAMINER

YANCHUS III, PAUL B

ART UNIT	PAPER NUMBER
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2116

DATE MAILED: 08/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/899,172

Applicant(s)

INOUE, KATSUMI

Examiner

Paul B Yanchus

Art Unit

2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/31/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art [AAPA], in view of, Gunn et al., US Patent no. 5,493,722 [Gunn].

Regarding claim 1, AAPA teaches a microcomputer that controls its operation clock signal in response to an external pulse signal including a header portion with a format preset in the microcomputer, said microcomputer comprising:

a reference data storage for prestoring a pulse length of the header portion [header length register, page 3, lines 5-10];

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an external pulse signal capturing section for capturing the external pulse signal in synchronization with a low frequency operation clock signal [sampling clock counter, page , line 29 – page 3, line 3];

a comparator for comparing a header length of the external pulse signal with the pulse length of the header portion fed from said reference data storage [clock count comparator, page 3, lines 9-12];

a clock switching section for switching the operation clock signal from the low frequency operation clock signal to a high frequency operation clock signal [page 4, lines 6-25].

AAPA teaches a microcomputer, which controls its operation clock signal according to wireless signal received from a remote control. AAPA teaches comparing the length of a received header portion of the received signal to a reference header length value to verify that the received signal is intended for the microcomputer. The AAPA does not teach additionally comparing the length of a received data portion of the received signal to a reference data length value to further verify that the received data signal is actually intended for the microcomputer.

Gunn teaches a method for receiving a wireless signal and operating a microprocessor-controlled device based on the received wireless signal. Gunn teaches checking the length [validity] of a header portion [STX, destination address and origin address fields] of the received wireless signal as well as the data portion [command and data fields] of the received wireless signal before attempting to operate the microprocessor based on the received wireless signal, in order to prevent any wireless signals caused by noise from being misinterpreted as legitimate wireless signals. The received wireless signal is ignored if any of the fields of the signal are invalidated [column 4, lines 44-67]. Gunn does not explicitly state that the data portion of the

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received wireless signal is temporarily stored when the received wireless signal is validated.

However, the data portion of the received wireless signal would necessarily have to be temporarily stored in some kind of data storage in order for the data to be successfully decoded and processed. Therefore, storing the data portion of the received wireless signal in data storage is an inherent feature of the Gunn method.

It would have been obvious to one of ordinary skill in the art to modify the external pulse signal validating apparatus taught by AAPA by checking the validity of both the header and data portions of the external pulse signal, as taught by Gunn, in order to reject and ignore any non-intended external pulse signals which occur as a result of noise. One of ordinary skill in the art would be motivated to make this modification to ensure that random noise will not be misinterpreted as an appropriate message [Gunn, column 4, lines 53-55].

Regarding claim 2, AAPA teaches that the clock switching section consists of software executed by a CPU [page 4, lines 15-20].

Regarding claim 3, AAPA teaches that the external pulse signal capturing section comprises:

edge detecting means for detecting an edge of a pulse of the input pulse signal by using an input of the external pulse signal as a trigger to start operation of said edge detecting means [page 3, lines 23-28]; and

clock switching signal output means for outputting, when said edge detecting means detects the edge of the pulse of the input pulse signal, a control signal requesting said CPU to switch the operation clock signal [page 4, lines 6-20], and

wherein said clock switching section halts generating all the operation clock signals when the external pulse signal is not input for more than a predetermined time period in a power-off mode [page 2, lines 16-21], and switches the operation clock signal in response to at least one of the control signal fed from said clock switching signal output means and the decoded result of the data stored in said data storage [page 4, lines 6-20].

Regarding claim 4, as described above, AAPA teaches that the clock switching section consists of software executed by a CPU [page 4, lines 15-20]. AAPA and Gunn do not explicitly teach storing the data portion of a plurality of external pulse signals in multiple data storing means to be subsequently decoded by the clock switching section. However, it is well known in the art that a conventional CPU must utilize some kind of data storing means to store input data in order to be able to successfully process or decode the input data.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shimohara, US Patent no. 5,436,853, teaches using edge detection circuitry to detect and process pulses of a received remote control signal.

Enomoto, US Patent no. 5,952,936, teaches checking the validity of both header data and command data of a received remote controller signal before processing the command data.

Horiguchi, EP 1111754 A2, teaches a remote control receiver comprising a power-on detecting block for detecting remote control power-on signals for waking a CPU.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul B Yanchus whose telephone number is (703) 305-8022. The examiner can normally be reached on Mon-Thurs 8:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on (703) 308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Paul Yanchus
July 21, 2004

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.

**REHANA PERVEEN
PRIMARY EXAMINER**